

<110> Jialing, Sun

<120> A superantigen fusion protein for anti-cancer therapy and methods for the production thereof

<130> 042601

<150> CN 200310109829.7

<151> 2003-12-21

<160> 4

<170> PatentIn version 3.1

<210> 1

<211> 903

<212> DNA

<213> artificial sequence

<220>

<221> misc_feature

<222> (1)..(903)

<223> coding sequence of fusion protein

<400> 1

aattccgata gcgagtgtcc tctgagtcac gatggttact gtctacatga cggcgtctgt	60
atgtatattg aggctctaga caagtacgcg tgtaattgcg ttgttggcta catcggtgag	120
cgctgtcagt atcgagatct gaaatggtgg gaacttagag gtggaggcgg ttcaggcgga	180
ggtggctctg gcggtggcgg atcgagcgag aaaagcgaag aaataaatga aaaagatttg	240
cgaaaaaagt ctgaattgca gggaacagct ttaggcaatc ttaaacaat ctattattac	300
aatgaaaaag ctaaaactga aaataaagag agtcacgac aatttttaca gcatactata	360
ttgtttaaag gcttttttac agatcattcg tggataacg atttattagt agattttgat	420
tcaaaggata ttgttgataa atataaaggg aaaaaagtag acttgtagtg tgcttattat	480
ggttatcaat gtgcgggtgg tacaccaaac aaaacagctt gtatgtatgg tgggtgaacg	540
ttacatgata ataatcgatt gaccgaagag aaaaaagtc cgatcaattt atggctagac	600
ggtaaacaaa atacagtacc ttgggaacg gttaaaacga ataagaaaaa tgtaactgtt	660
caggagttgg atcttcaagc aagacgttat ttacaggaaa aatataattt atataactct	720
gatgtttttg atgggaaggt tcagagggga ttaatcgtgt ttcatacttc tacagaacct	780
tcggttaatt acgatttatt tgggtgctcaa ggacagtatt caaatacact attaagaata	840
tatagagata ataaaacgat taactctgaa aacatgcata ttgatataata tttatatata	900
agt	903

<210> 2

<211> 301

<212> PRT

<213> artificial sequence

<220>

<221> misc_feature

<222> (1)..(301)

<223> fusion protein

<400> 2

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Asp Gly Val Cys Met Tyr Ile Glu Ala Leu Asp Lys Tyr Ala Cys Asn
          20          25          30
Cys Val Val Gly Tyr Ile Gly Glu Arg Cys Gln Tyr Arg Asp Leu Lys
          35          40          45
Trp Trp Glu Leu Arg Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly
          50          55          60
Gly Gly Gly Ser Ser Glu Lys Ser Glu Glu Ile Asn Glu Lys Asp Leu
65          70          75          80
Arg Lys Lys Ser Glu Leu Gln Gly Thr Ala Leu Gly Asn Leu Lys Gln
          85          90          95
Ile Tyr Tyr Tyr Asn Glu Lys Ala Lys Thr Glu Asn Lys Glu Ser His
          100          105          110
Asp Gln Phe Leu Gln His Thr Ile Leu Phe Lys Gly Phe Phe Thr Asp
          115          120          125
His Ser Trp Tyr Asn Asp Leu Leu Val Asp Phe Asp Ser Lys Asp Ile
          130          135          140
Val Asp Lys Tyr Lys Gly Lys Lys Val Asp Leu Tyr Gly Ala Tyr Tyr
145          150          155          160
Gly Tyr Gln Cys Ala Gly Gly Thr Pro Asn Lys Thr Ala Cys Met Tyr
          165          170          175
Gly Gly Val Thr Leu His Asp Asn Asn Arg Leu Thr Glu Glu Lys Lys
          180          185          190
Val Pro Ile Asn Leu Trp Leu Asp Gly Lys Gln Asn Thr Val Pro Leu
          195          200          205
Glu Thr Val Lys Thr Asn Lys Lys Asn Val Thr Val Gln Glu Leu Asp
210          215          220
Leu Gln Ala Arg Arg Tyr Leu Gln Glu Lys Tyr Asn Leu Tyr Asn Ser
225          230          235          240
Asp Val Phe Asp Gly Lys Val Gln Arg Gly Leu Ile Val Phe His Thr
          245          250          255
Ser Thr Glu Pro Ser Val Asn Tyr Asp Leu Phe Gly Ala Gln Gly Gln
          260          265          270
Tyr Ser Asn Thr Leu Leu Arg Ile Tyr Arg Asp Asn Lys Thr Ile Asn
          275          280          285
Ser Glu Asn Met His Ile Asp Ile Tyr Leu Tyr Thr Ser
          290          295          300
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<210> 3

<211> 1107

<212> DNA

<213> artificial sequence

<220>

<221> misc_feature

<222> (1)..(1107)

<223> coding sequence of fusion protein

<400> 3

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tatcagcgca gctactgccg tccaatcgag accctggtgg acatcttcca ggagtaccct 120
gatgagatcg agtacatctt caagccatcc tgtgtgcccc tgatgcgatg cgggggctgc 180
tgcaatgacg agggcctgga gtgtgtgccc actgaggagt ccaacatcac catgcagatt 240
atgcggatca aacctcacca aggccagcac ataggagaga tgagcttcct acagcacaac 300
aaatgtgaat gcagaccaa gaaagataga gcaagacaag aaaaatgtga caagccgagg 360
cggggtggag gcggttcagg cggagggtgg tctggcgggtg gcggatcgag cgagaaaagc 420
gaagaaataa atgaaaaaga tttgcgaaaa aagtctgaat tgcagggaac agcttttaggc 480
aatcttaaac aaatctatta ttacaatgaa aaagctaaaa ctgaaaataa agagagtcac 540
gatcaatttt tacagcatac tatattgttt aaaggctttt ttacagatca ttcgtggtat 600
aacgatttat tagtagattt tgattcaaag gatattgttg ataaatataa agggaaaaaa 660
gtagacttgt atggtgctta ttatggttat caatgtcggg gtggtacacc aaacaaaaca 720
gcttgtatgt atggtggtgt aacgttacat gataataatc gattgaccga agagaaaaaa 780
gtccgatca atttatggct agacggtaaa caaaatacag tacctttgga aacggttaaa 840
acgaataaga aaaatgtaac tgttcaggag ttggatcttc aagcaagacg ttatttacag 900
gaaaaatata atttatataa ctctgatgtt tttgatggga aggttcagag gggattaatc 960
gtgtttcata ctctacaga accttcggtt aattacgatt tatttggtgc tcaaggacag 1020
tattcaaata cactattaag aatatataga gataataaaa cgattaactc tgaaaacatg 1080
catattgata tatatttata tacaagt 1107
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<210> 4

<211> 369

<212> PRT

<213> artificial sequence

<220>

<221> misc_feature

<222> (1)..(369)

<223> fusion protein

<400> 4

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Ala Pro Met Ala Glu Gly Gly Gly Gln Asn His His Glu Val Val Lys
1           5           10           15
Phe Met Asp Val Tyr Gln Arg Ser Tyr Cys His Pro Ile Glu Thr Leu
          20           25           30
Val Asp Ile Phe Gln Glu Tyr Pro Asp Glu Ile Glu Tyr Ile Phe Lys
          35           40           45
Pro Ser Cys Val Pro Leu Met Arg Cys Gly Gly Cys Cys Asn Asp Glu
          50           55           60
Gly Leu Glu Cys Val Pro Thr Glu Glu Ser Asn Ile Thr Met Gln Ile
65           70           75           80
Met Arg Ile Lys Pro His Gln Gly Gln His Ile Gly Glu Met Ser Phe
          85           90           95
Leu Gln His Asn Lys Cys Glu Cys Arg Pro Lys Lys Asp Arg Ala Arg
          100          105          110
Gln Glu Lys Cys Asp Lys Pro Arg Arg Gly Gly Gly Gly Ser Gly Gly
          115          120          125
Gly Gly Ser Gly Gly Gly Gly Ser Ser Glu Lys Ser Glu Glu Ile Asn
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130	135	140
Glu Lys Asp Leu Arg Lys Lys Ser Glu Leu Gln Gly Thr Ala Leu Gly		
145	150	155
Asn Leu Lys Gln Ile Tyr Tyr Tyr Asn Glu Lys Ala Lys Thr Glu Asn		
	165	170
Lys Glu Ser His Asp Gln Phe Leu Gln His Thr Ile Leu Phe Lys Gly		
	180	185
Phe Phe Thr Asp His Ser Trp Tyr Asn Asp Leu Leu Val Asp Phe Asp		
	195	200
Ser Lys Asp Ile Val Asp Lys Tyr Lys Gly Lys Lys Val Asp Leu Tyr		
	210	215
Gly Ala Tyr Tyr Gly Tyr Gln Cys Ala Gly Gly Thr Pro Asn Lys Thr		
225	230	235
Ala Cys Met Tyr Gly Gly Val Thr Leu His Asp Asn Asn Arg Leu Thr		
	245	250
Glu Glu Lys Lys Val Pro Ile Asn Leu Trp Leu Asp Gly Lys Gln Asn		
	260	265
Thr Val Pro Leu Glu Thr Val Lys Thr Asn Lys Lys Asn Val Thr Val		
	275	280
Gln Glu Leu Asp Leu Gln Ala Arg Arg Tyr Leu Gln Glu Lys Tyr Asn		
	290	295
Leu Tyr Asn Ser Asp Val Phe Asp Gly Lys Val Gln Arg Gly Leu Ile		
305	310	315
Val Phe His Thr Ser Thr Glu Pro Ser Val Asn Tyr Asp Leu Phe Gly		
	325	330
Ala Gln Gly Gln Tyr Ser Asn Thr Leu Leu Arg Ile Tyr Arg Asp Asn		
	340	345
Lys Thr Ile Asn Ser Glu Asn Met His Ile Asp Ile Tyr Leu Tyr Thr		
	355	360
Ser		

<210> 5
 <211> 45
 <212> DNA
 <213> artificial sequence

<220>
 <221> misc_feature
 <222> (1)..(45)
 <223> primer

<400> 5
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45

<210> 6
 <211> 15
 <212> PRT
 <213> artificial sequence

<220>

<221> misc_feature
<222> (1)..(15)
<223> linker peptide

<400> 6

Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser Gly Gly Gly Gly Ser
1 5 10 15

<210> 7
<211> 34
<212> DNA
<213> artificial sequence

<220>
<221> misc_feature
<222> (1)..(34)
<223> primer

<400> 7
gagcccgggc agcgagaaaa gcgaagaaat aaat

34

<210> 8
<211> 40
<212> DNA
<213> artificial sequence

<220>
<221> misc_feature
<222> (1)..(40)
<223> primer

<400> 8
gtgcggccgc acttgatat aaatatatat caatatgcat

40

<210> 9
<211> 28
<212> DNA
<213> artificial sequence

<220>
<221> misc_feature
<222> (1)..(28)
<223> primer

<400> 9
gagcccgggc aattccgata gcgagtgt

28

<210> 10
<211> 28
<212> DNA

<213> artificial sequence

 <220>
 <221> misc_feature
 <222> (1)..(28)
 <223> primer

 <400> 10
 gtgcggccgc tctaagttcc caccattt 28

 <210> 11
 <211> 31
 <212> DNA
 <213> artificial sequence

 <220>
 <221> misc_feature
 <222> (1)..(31)
 <223> primer

 <400> 11
 gagccccggc gcacccatgg cagaaggagg a 31

 <210> 12
 <211> 55
 <212> DNA
 <213> artificial sequence

 <220>
 <221> misc_feature
 <222> (1)..(55)
 <223> primer

 <400> 12
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 <210> 13
 <211> 54
 <212> DNA
 <213> artificial sequence

 <220>
 <221> misc_feature
 <222> (1)..(54)
 <223> primer

 <400> 13
 gccagagcca cctccgctg aaccgcctcc acctctaagt tcccaccatt tcag 54

 <210> 14
 <211> 60

<212> DNA
<213> artificial sequence

<220>
<221> misc_feature
<222> (1)..(60)
<223> primer

<400> 14
tcaggcggag gtggctctgg cggtaggcgga tcgagcgaga aaagcgaaga aataaatgaa 60

<210> 15
<211> 57
<212> DNA
<213> artificial sequence

<220>
<221> misc_feature
<222> (1)..(57)
<223> primer

<400> 15
gccagagcca cctccgcctg aaccgcctcc accccgcctc ggcttgcac atttttc 57